



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,617	12/18/2000	Victor Kouznetsov	002.0181.01	9890

22895 7590 01/23/2006

PATRICK J S INOUE P S
810 3RD AVENUE
SUITE 258
SEATTLE, WA 98104

EXAMINER

SWEARINGEN, JEFFREY R

ART UNIT PAPER NUMBER

2145

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/740,617

Applicant(s)

KOUZNETSOV ET AL.

Examiner

Jeffrey R. Swearingen

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-11 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-11 and 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/13/05 10/13/05 & 10/17/05 | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Response to Arguments***

1. Applicant's arguments filed 13 October 2005 have been fully considered but they are not persuasive.
2. Applicant's amendments overcame the rejection under 35 U.S.C. 112, second paragraph.
3. Applicant argued the *server database engine comparing subsequently modified versions of the structured virus database to form a delta set of virus definition records, wherein the client database engine stores the delta virus definition records set into the structured virus database* was not taught by Nachenberg in view of Serbinis. As shown in Nachenberg, column 7, lines 25-27, Nachenberg detected virus code in a computer system. The virus database needed to create a *delta set of virus definition records* in order to detect the virus code in a computer system. Creation of a *delta set of virus definitions* required *comparing subsequently modified versions of the structured virus database* to create definitions used in virus code detection.
4. Applicant argued Serbinis's addition of a relational database to Nachenberg did not disclose a *client database engine storing at least one updated virus definition record into the structured virus database indexed by the identifier and the at least one virus name for each virus definition record*. Serbinis disclosed the use of a relational database. Applicant conceded that indexing of records was inherent to a relational database in the remarks of 13 October 2005, page 12, line 1. The documents indexed in Serbinis had various items of each object, including a version name and a version id. (Serbinis, column 8, lines 45-47) Applicant conceded that indexing was inherent, and Serbinis showed that an id and a name of an object were present in each object record. Serbinis conclusively taught that any portion of a record in any combination could be indexed in the relational database. Serbinis clearly taught a *client database engine storing at least one updated virus definition record into the structured virus database indexed by the identifier and the at least one virus name for each virus definition record*.

Art Unit: 2145

5. Applicant argued Serbinis's addition did not teach a *converter converting the virus definition records stored in the structured virus database into a virus data file comprising virus definition sets*. Applicant conceded that Serbinis did teach the conversion of a document to a file format. Applicant did not specify the makeup of a *virus data file comprising virus definition sets*. Serbinis taught that such a document was included in a database (Serbinis, column 8, lines 12-62), and was treated as a *virus definition record* in the combination of Nachenberg and Serbinis. In this treatment, the *virus definition records* or document records were converted into a data file comprising *virus definition sets* (Serbinis, column 10, lines 43-50, a particular file format suitable for the Authorized Users), which in the combination of Nachenberg-Serbinis was a *virus data file*.
6. Applicant argued *binary data encoding instructions* were not taught by Nachenberg. The antivirus program in Nachenberg, column 6, lines 15-58 was the *binary data encoding instructions* claimed by Applicant.
7. Applicant argued *names associated with the computer virus* were not taught in the Nachenberg-Serbinis combination. The names were shown in Serbinis. See Serbinis, column 8, lines 45-57.
8. Applicant argued a *server database engine that builds the virus definition records into the structured virus database by generating the identifier for each virus definition record and populating each virus definition record with the virus definition sentence and the virus removal sentence for the computer virus* was not taught by Nachenberg-Serbinis. The creation of a virus database was taught by the Nachenberg-Serbinis combination. Nachenberg, column 1, lines 39-45 showed that the virus removal sentence was present in the combination (identify particular virus strains for removal). The virus definition sentence was used to identify the virus strains. Serbinis taught creating a database from document records (previously established herein as virus definition records). The identifier generated for each record was automatically created as the primary key in the Serbinis database as each record was added to the database.
9. Applicant argued the lack of *converting each virus definition set in the virus data file into a virus definition record* was not in Nachenberg-Serbinis. As previously presented herein, conversion of files was taught in Serbinis. Nachenberg applied to Serbinis treated the Serbinis

Art Unit: 2145

document objects as virus definition records. Said records were converted with the techniques of Serbinis.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-2, 4-11, and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nachenberg (U.S. Patent No. 6,357,008) in view of Serbinis et al. (U.S. Patent No. 6,314,425).

12. In regard to claim 1, Nachenberg disclosed a *structured virus database storing one or more virus definition records* (column 1, lines 27-33, lines 42-45; this was in the background of the Nachenberg patent as being well known prior art); *an identifier uniquely identifying a computer virus* (column 1, lines 27-33); *at least one virus name associated with the computer virus* (column 2, lines 43-45); *a virus definition sentence comprising object code providing operations to detect the identified computer virus within a computer system* (column 1, lines 39-41, "signature scanning"); *a virus removal sentence comprising object code providing operations to clean the identified computer virus from the computer system* (column 1, lines 39-41; Particular virus strains can be identified for removal.); *and a server database engine comparing subsequently modified versions of the structured virus database to form a delta set of virus definition records* (column 7, lines 25-27), *wherein the client database engine stores the delta virus definition records set into the structured virus database* (column 1, lines 27-33).

Nachenberg further disclosed a *server database engine building the virus definition records into*

Art Unit: 2145

the structured virus database by generating the identifier for each virus definition record and populating each virus definition record with the virus definition sentence and the virus removal sentence for the computer virus. This was part of the virus signature database system inherently taught in column 1, lines 39-45.

13. Nachenberg taught use of a database. See Nachenberg, column 1, lines 40-45.

Nachenberg failed to explicitly disclose the use of a client database engine to store records into a database indexed by identifiers and names. Nachenberg likewise did not teach converting records stored in a database into a data file. However, Serbinis taught the implementation of a relational database (column 6, lines 27-53) which allowed for indexing by identifiers (inherent to a relational database, also taught in Serbinis, column 8, lines 12-62) and conversion of records into another file format (column 10, lines 15-61). Therefore, because Nachenberg taught use of a database and Serbinis taught commonly known techniques in database operation such as record conversion and indexing of records by various means, it would have been obvious to one of ordinary skill in the art to combine the Nachenberg invention with the teachings of Serbinis in order to allow easier access to records in a virus database.

14. In regard to claim 2, Nachenberg further disclosed *a client anti-virus language decompiler converting each virus definition set in the virus data file into a virus definition record.* Column 2, lines 18-25 of Nachenberg teaches the detection of new and unknown viruses. Column 1, lines 39-45 of Nachenberg teaches the use of virus definitions in a signature database. In order for the virus definitions to enter the virus database, the limitations taught in claim 2 are inherent to the Nachenberg invention.

15. In regard to claim 5, Nachenberg in view of Serbinis is applied as in claim 1. Nachenberg further disclosed *a server anti-virus language decompiler converting each virus definition set in the virus data file into a virus definition record.* See rejection of claim 2.

16. In regard to claim 6, Nachenberg in view of Serbinis is applied as in claim 1. Nachenberg further disclosed *the database engine accessing the virus definition records in the structured virus*

Art Unit: 2145

database to perform at least one of adding, removing, and replacing a virus definition record.

Nachenberg teaches updating a virus signature database in column 1, lines 44-45.

17. In regard to claim 7, Nachenberg in view of Serbinis is applied as in claim 1. Serbinis further taught compression and decompression of a file that is transferred. See Serbinis, column 11, line 66 – column 12, line 7 and column 13, lines 46-49.

18. In regard to claim 8, Nachenberg in view of Serbinis is applied as in claim 1. Serbinis further taught encryption and decryption of a file that is transferred. See Serbinis, column 11, line 66 – column 12, line 7 and column 13, lines 46-49.

19. In regard to claim 9, Nachenberg in view of Serbinis is applied as in claim 1. The motivation to combine Nachenberg with Serbinis was the additional limitations of the Serbinis relational database as explained in the rejection of claim 1.

20. Claim 10 meets the same limitations as claim 1, and the rejection of claim 1 is applied against claim 10.

21. Claim 11 meets the same limitations as claim 2, and the rejection of claim 2 is applied against claim 11.

22. Claim 14 meets the same limitations as claim 5, and the rejection of claim 5 is applied against claim 14.

23. Claim 15 meets the same limitations as claim 6, and the rejection of claim 6 is applied against claim 15.

24. Claim 16 meets the same limitations as claim 7, and the rejection of claim 7 is applied against claim 16.

25. Claim 17 meets the same limitations as claim 8, and the rejection of claim 8 is applied against claim 17.

26. Claim 18 meets the same limitations as claim 9, and the rejection of claim 9 is applied against claim 18.

27. Claim 19 meets the same limitations as claim 10, and the rejection of claim 10 is applied against claim 19.

Art Unit: 2145

28. Claim 20 meets the same limitations of claim 1, and the rejection of claim 1 is applied against claim 20.

Conclusion

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

30.	Bates et al.	U.S. Patent No. 6,785,732
31.	Kouznetsov	U.S. Patent No. 6,029,256
32.	Olivier et al.	U.S. Pub. No. 2005/0283837

33. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

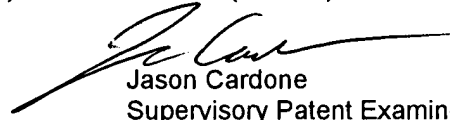
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571) 272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2145

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason Cardone
Supervisory Patent Examiner
Art Unit 2145